I. AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 46 (Canceled).

47. (Currently Amended) A method for screening a subject for sensitivity to a thymidylate synthase (TS) – directed chemotherapeutic drug, comprising:

determining the genotype of ~~the~~ a subject's biological sample at a tandemly repeated 28 base pair sequence in the 5' untranslated region (UTR) of a TS gene in the sample; ~~of~~ and

correlating said genotype to said sensitivity to TS – directed chemotherapy.

48. (Previously Presented) The method of claim 47, wherein said biological sample consist of tumor cells or normal cells.

49. (Canceled).

50. (Previously Presented) The method of claim 47, wherein the genotype is selected from the group consisting of homozygous for a triple repeat of the tandemly repeated sequence, heterozygous for a double repeat and a triple repeat of the tandemly repeated sequence, or homozygous for a double repeat of the tandemly repeated sequence.

51. (Canceled).

52. (Previously Presented) The method of claim 47, wherein the TS directed drug is a fluoropyrimidine.

53. (Previously Presented) The method of claim 52, wherein the fluoropyrimidine is 5-fluorouracil.

54. (Previously Presented) The method of claim 53, wherein the subject is a human subject.

55. (Canceled).

56. (Previously Presented) The method of claim 47, wherein said determining the genotype is by analysis of the polymerase chain reaction product of the 5'UTR.

57. (Currently Amended) A kit for use in screening for the effectiveness of thymidylate synthase (TS) directed drug therapy in human subjects, the kit comprising: means for determining a genomic polymorphism~~, if present,~~ at a tandemly repeated 28 base pair sequence of the 5 'UTR of the TS gene;

one or more of positive controls, negative controls, reagents, or sequencing markers;

and instructions for correlating the genomic polymorphism of the 5' UTR of the TS gene to sensitivity to TS directed drug therapy.

58. (Canceled)

59. (Previously Presented) The kit of claim 58, wherein the kit components may be provided in solution or as a liquid dispersion.

60. (Previously Presented) The kit of claim 58, comprising DNA tandemly repeated sequences that determine the type of genomic polymorphism of the TS gene in Tris-EDTA buffer solution kept at about 4°C.

61. (Previously Presented) The method of claim 47, wherein the subject's biological sample fluid comprises a body fluid.

62. (Previously Presented) The method of claim 61, wherein the body fluid is selected from the group consisting of blood and semen.

63. (Currently Amended) The method of claim 47, wherein the biological sample comprises ~~is selected from the group consisting of~~ peripheral blood cells.

64. (Previously Presented) The method of claim 47, wherein the biological sample is selected from the group consisting of liver cells, skin cells, blood cells, hair cells and semen cells.

65. (Previously Presented) The method of claim 61, wherein the biological sample is preserved.

66. (Currently Amended) The method of any one of claims 61 to 65, wherein the subject's biological sample comprises ~~extratumoral cells are~~ normal cells.

67. (Currently Amended) The method of claim 47, wherein the subject suffers from a cancer selected from the group consisting of colorectal cancer, gastric cancer and ~~liver cancer~~ metastatic liver cancer associated with disseminated colon cancer.